PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 1 JANUARY 1984

CONTENTS

Hypodipsia, stereotypy and hyperactivity induced by β-phenylethylamine in the water-deprived rat.
COOPER, S. J. and C. T. DOURISH 1

Chlordiazepoxide, go-nogo successive discrimination and brain biogenic amines in cats.
VACHON, L., A. KITSIKIS and A. G. ROBERGE 9

Cholecystokinin accelerates the rate of habituation to a novel environment.
CRAWLEY, J. N. 23

Feeding, drinking, urine osmolality in DI Brattleboro rats: Changes by morphine, naloxone, D-amino acids, prolyl-leucyl-glycinamide (PLG).
KOYUNCUOĞLU, H., K. BERKMAN and H. SABUNCU 29

Effect of naltrexone on food intake and hoarding in white-footed mice *(Peromyscus)*.
TANNENBAUM, M. G. and E. B. PIVORUN 35

Effects of chlordiazepoxide on food anticipation, drinking and other behaviors in food-deprived and satiated rats.
NIETO, J. and A. POSADAS-ANDREWS 39

Intrathecal chronic catheterization in the rat.
DIB, B. 45

Dopamine applied into the nucleus accumbens and discriminative avoidance in rats.
BRACS, P. U., D. M. JACKSON and P. GREGORY 49

Nicotine preference increases after cigarette deprivation.
ROSE, J. E., M. E. JARVIK and S. ANANDA 55

The discriminative stimulus properties of the R_2 isomer of viminol.
SHOOK, J. E., M. J. KALLMAN and W. L. DEWEY 59

The effects of cimetidine on schedule-controlled responding and locomotor activity in rats.
RASTOGI, S. K. and D. E. McMILLAN 63

Stimulation of dopamine autoreceptors elicits "premature ejaculation" in rats.
NAPOLI-FARRIS, L., W. FRATTA and G. L. GESSA 69

Pimozide and amphetamine have opposing effects on the reward summation function.
GALLISTEL, C. R. and D. KARRAS 73

Visual evoked cortical potentials in the cat after retinal modifications induced by intraocular kainic acid.
SIGÜENZA, J. A. and P. GOMEZ-RAMOS 79

Cardiac vagolytic action of some neuromuscular blockers.
PUNNEN, S., E. R. GONZALEZ, A. J. KRIEGER and H. N. SAPRU 85

Contents continued

Apomorphine effects on behavioral response to ethanol in mice selectively bred for differential sensitivity to ethanol.
DUDEK, B. C., M. E. ABBOTT, A. GARG and T. J. PHILLIPS 91

Amphetamine and LSD as discriminative stimuli: Alterations following neonatal monoamine reductions.
MINNEMA, D. J. and J. A. ROSECRANS 95

Acute effects of natural and synthetic cannabis compounds on prolactin levels in human males.
MENDELSON, J. H., J. ELLINGBOE and N. K. MELLO 103

Early cannabinoid exposure influences neuroendocrine and reproductive functions in mice: I. Prenatal exposure.
DALTERIO, S., R. STEGER, D. MAYFIELD and A. BARTKE 107

Early cannabinoid exposure influences neurotndocrine and reproductive functions in mice: II. Postnatal effects.
DALTERIO, S., R. STEGER, D. MAYFIELD and A. BARTKE 115

Effects of ethanol and salsolinol on catecholamine function in LS and SS mice.
SMOLEN, T. N., T. C. HOWERTON and A. C. COLLINS 125

Phenylethylamine, norepinephrine and mounting behavior in the male rat.
SEGAL, M., E. SHOHAMI and D. M. JACOBOWITZ 133

Effects of pentobarbital and *d*-amphetamine on oral phencyclidine self-administration in rhesus monkeys.
CARROLL, M. E. 137

Self-administration of orally-delivered methohexital in rhesus monkeys with phencyclidine or pentobarbital histories: Effects of food deprivation and satiation.
CARROLL, M. E., D. C. STOTZ, D. J. KLINER and R. A. MEISCH 145

Neonatal cerebellectomy alters ethanol-induced sleep time of short sleep but not long sleep mice.
PALMER, M. R., L. OLSON, T. V. DUNWIDDIE, B. J. HOFFER and Å. SEIGER 153

BRIEF COMMUNICATION

Memory retention: Effect of prolonged cholinergic stimulation in mice.
FLOOD, J. F., G. E. SMITH and A. CHERKIN 161

ANNOUNCEMENTS 165

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 2 FEBRUARY 1984

CONTENTS

Comparison of two methods for estimating the acetylcholine turnover in discrete rat brain structures.
BLUTH, R., R. LANGNICKEL, R. MORGENSTERN and W. OELSZNER 169

Opiate withdrawal: The result of conditioning or physiological mechanisms?
ZELLNER, D. A., R. J. DACANAY and A. L. RILEY 175

Comparison of behavioral effects of cathinone, amphetamine and apomorphine.
SCHECHTER, M. D., J. A. ROSECRANS and R. A. GLENNON 181

Differential effects of a new serotoninomimetic drug, 8-OH-DPAT on copulatory behavior and pelvic thrusting pattern in the male rat.
MORALI, G. and K. LARSSON 185

Hyperactivity induced by prenatal administration of Methylazoxymethanol: Association with altered performance on conditioning tasks in rats.
CANNON-SPOOR, H. E. and W. J. FREED 189

Efficacy of choice testing to predict chronic ingestion of drinking solutions adulterated with chemicals.
KALLMAN, M. J. and G. L. KAEMPF 195

The stimulus properties of para-methoxyamphetamine: A nonessential serotonergic component.
WINTER, J. C. 201

Effects of cholinergic and monoaminergic antagonists and tranquilizers upon spatial memory in rats.
HIRAGA, Y. and T. IWASAKI 205

Phencyclidine-like behavioral effects of 2-methyl-3,3-diphenyl-3-propanolamine (2-MDP).
TANG, A. H., A. A. CANGELOSI, R. A. CODE and S. R. FRANKLIN 209

P-chloroamphetamine and a side-chain fluorinated analog: Effects on brain amine levels and behavior.
BECK, C. H. M., H. L. CHOW, G. B. BAKER and R. T. COUTTS 215

Effect of prolonged exposure to nicotine and stress on the pituitary-adrenocortical response; the possibility of cross adaptation.
CAM, G. R. and J. R. BASSETT 221

Self-administration of central stimulants by rats: A comparison of the effects of d-amphetamine, methylphenidate and McNeil 4612.
NIELSEN, J. A., N. J. DUDA, D. J. MOKLER and K. E. MOORE 227

Alprazolam and lorazepam effects on memory acquisition and retrieval processes.
BLOCK, R. I. and R. BERCHOU 233

Contents continued

Magnesium selectively inhibits N-methyl-aspartic acid-induced hypermotility after intra-accumbens injection.
DONAZANTI, B. A. and N. J. URETSKY 243

Circadian variation in susceptibility to methamphetamine after repeated administration in mice.
KURIBARA, H. and S. TADOKORO 247

Phencyclidine during pregnancy in the rat: Effects on locomotor activity in the offspring.
HUTCHINGS, D. E., S. R. BODNARENKO and R. DIAZ-DeLEON 251

Contrasting effects of *d*-amphetamine on affiliation and aggression in monkeys.
SMITH, E. O. and L. D. BYRD 255

A procedure to enhance auditory brainstem response reliability in unrestrained rats.
LEE, J. A., D. W. NIELSEN and R. F. BERMAN 261

Behavioral and neurochemical alterations in the offspring of rats after maternal or paternal inhalation exposure to the industrial solvent 2-methoxyethanol.
NELSON, B. K., W. S. BRIGHTWELL, J. R. BURG and V. J. MASSARI ... 269

Behavioral effects of ethanol and salsolinol in mice selectively bred for acute sensitivity to ethanol.
SMOLEN, T. N. and A. C. COLLINS 281

Immobilization-induced analgesia: Possible involvement of a non-opioid circulating substance.
JØRGENSEN, H. A., O. B. FASMER, O.-G. BERGE, L. TVEITEN and K. HOLE 289

Lack of acute alcohol effects on estradiol and luteinizing hormone in female Macaque monkey.
MELLO, N. K., M. P. BREE, J. ELLINGBOE, J. H. MENDELSON and K. L. HARVEY 293

Effect of cholinergic and adrenergic stimulation of the subfornical organ on water intake.
MENANI, J. V., W. A. SAAD, L. A. A. CAMARGO, J. ANTUNES-RODRIGUES, M. R. COVIAN and W. A. SAAD 301

Gamma-butyrolactone increases the rate of punished lever pressing by rats.
McINTIRE, K. D. and B. J. LIDDELL 307

BRIEF COMMUNICATION

Oxazepam induced mouse killing by rats.
LEAF, R. C., D. J. WNEK and S. LAMON 311

ANNOUNCEMENTS 315

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 3 MARCH 1984

CONTENTS

The effects of several anorexigenics on monkey social behavior.
BEDFORD, J. A., D. K. L. MARQUIS and M. C. WILSON 317

Force requirements in lever-pressing and responding after haloperidol.
ASIN, K. E. and H. C. FIBIGER 323

Sex differences and asymmetries of catecholamines: Relation to turning preferences.
DARK, K. A., G. ELLMAN, H. V. S. PEEKE, D. GALIN and V.I. REUS ... 327

Influence of shock-induced fighting and social factors on dopamine turnover in cortical and limbic areas in the rat.
DANTZER, R., D. GUILLONEAU, P. MORMÈDE, J. P. HERMAN and M. LE MOAL 331

p-Chlorophenylalanine alters pacing of copulation in female rats.
EMERY, D. E. and R. L. MOSS 337

Pyrazolo[1,5-a]pyrimidines: Receptor binding and anxiolytic behavior studies.
LOEW, G., L. TOLL, J. LAWSON, E. UYENO and H. KAEGI 343

Heightened aggressive behavior by animals interacting with alcohol-treated conspecifics: Studies with mice, rats and squirrel monkeys.
MICZEK, K. A., J. T. WINSLOW and J. F. DEBOLD 349

Effects of catecholamine-related mammalian alkaloids on spontaneous and vasopressin-induced behavior in mice.
MEISENBERG, G., W. H. SIMMONS and M. A. COLLINS 355

Site-specific naloxone blockade of brain self-stimulation duration.
FREEDMAN, N. L. and D. PANGBORN 361

Effects of chronic intermittent and continuous amphetamine administration on acoustic startle.
KOKKINIDIS, L. 367

Relationship between the development of behavioral tolerance and the biodisposition of phencyclidine in mice.
FREEMAN, A. S., B. R. MARTIN and R. L. BALSTER 373

Interactions of naloxone and haloperidol with phencyclidine: Effects on milk intake.
WAGNER, G. C., C. M. FRANKO and A. TOMIE 379

Caffeine pretreatment: Enhancement and attenuation of d-amphetamine-induced activity.
WHITE, B. C. and G. E. KELLER, III 383

Contents continued

Caffeine reduces amphetamine-induced activity in asymmetrical interaction.
WHITE, B. C., K. L. HASWELL, C. D. KASSAB, D. HARKINS, JR. and P. M. CRUMBIE 387

Effects of norepinephrine and serotonin uptake inhibitors on the schedule-controlled behavior of the pigeon.
LEANDER, J. D. and R. B. CARTER 391

Cholinergic modulation of stimulant-induced behavior.
GONZALEZ, L. P. and E. H. ELLINWOOD, JR. 397

Investigation of the reported protective effect of cycloheximide on memory.
DAVIS, H. P., M. R. ROSENZWEIG, E. A. GROVE and E. L. BENNETT ... 405

Amphetamine cumulation and tolerance development: Concurrent and opposing phenomena.
SPARBER, S. B. and L. H. FOSSOM 415

Postsynaptic serotonergic blockade following chronic antidepressive treatment with trazodone in an animal model of depression.
HINGTGEN, J. N., H. C. HENDRIE and M. H. APRISON 425

Limbic acetylcholine turnover rates correlated with rat morphine-seeking behaviors.
SMITH, J. E., C. CO and J. D. LANE 429

Limbic muscarinic cholinergic and benzodiazepine receptor changes with chronic intravenous morphine and self-administration.
SMITH, J. E., C. CO and J. D. LANE 443

Self-administration of methionine enkephalin into the nucleus accumbens.
GOEDERS, N. E., J. D. LANE and J. E. SMITH 451

Irritable aggression induced by Δ^9-tetrahydrocannabinol in rats pretreated with 6-hydroxydopamine.
FUJIWARA, M., Y. KATAOKA, Y. HORI and S. UEKI 457

BRIEF COMMUNICATIONS

Modification of *alpha*-adrenoceptor agonist antinociceptive activity by nisoxetine: A selective inhibitor of noradrenergic uptake.
HYNES, M. D. and J. K. HENDERSON 463

Latent inhibition in the aversion to oral methadone.
LYNCH, M. R., J. H. PORTER and J. A. ROSECRANS 467

Pimozide blocks the open-field hyperactivity produced by lesions of the ventral noradrenergic bundle in rats.
MILLAN, M. H. and M. J. MILLAN 473

Effects of pre-training administration of scopolamine on learning and retention in the cockroach, *P. americana*.
BARRACO, D. A. and E. M. EISENSTEIN 479

Opiate antagonists reverse the hypoactivity associated with systemic anaphylaxis in mice.
AMIR, S. 483

ANNOUNCEMENTS 487

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 4 APRIL 1984

CONTENTS

Effects of *d*-amphetamine and *d*-fenfluramine on performance of rats in a food maze.
RECH, R. H., F. BORSINI and R. SAMANIN 489

The effect of diazepam on a conditioned emotional response in the rat.
MÉTHOT, C. and R. DEUTSCH 495

Further investigation of the discriminative stimulus properties of MDA.
GLENNON, R. A. and R. YOUNG 501

Pharmacologically specific pretreatment effects on apomorphine-mediated conditioned taste aversions in rats.
PRATT, J. A. and I. P. STOLERMAN 507

Clozapine—A serotonin antagonist?
FINK, H., R. MORGENSTERN and W. OELSSNER 513

Vasopressin release by D-aspartic acid, morphine and prolyl-leucyl-glycinamide (PLG) in DI Brattleboro rats.
KOYUNCUOĞLU, H., K. BERKMAN, I. HATIPOĞLU and H. SABUNCU ... 519

Effect of lutenizing hormone-releasing hormone antiserum on sexual behavior in the female rat.
COOPER, R. L., M. SEPPALA and M. LINNOILA 527

Agonist-antagonistic interactions of pentazocine with morphine studied in mice.
SHIMADA, A., H. IIZUKA and T. YANAGITA 531

Resistance of schedule-induced behaviours to hippocampal lesions.
TANG, C., M. WALLACE, G. SINGER and L. MACKENZIE 537

Modification of drug effects by l-α-acetylmethadol.
McMILLAN, D. E. and M. BROCCO 543

The effects of Δ^9-tetrahydrocannabinol on serum thyrotropin levels in the rat.
HILLARD, C. J., N. E. FARBER, T. C. HAGEN and A. S. BLOOM 547

Behaviors induced by intrastriatal dopamine vary independently across the estrous cycle.
JOYCE, J. N. and C. VAN HARTESVELDT 551

Effects of mecamylamine, nicotine, atropine and physostigmine on the phencyclidine-induced behavioral toxicity.
CHATURVEDI, A. K. 559

Interstrain variation in acute toxic response to caffeine among inbred mice.
SEALE, T. W., P. JOHNSON, J. M. CARNEY and O. M. RENNERT 567

Contents continued

Estradiol application to one striatum produces postural deviation to systemic apomorphine.
JOYCE, J. N. and C. VAN HARTESVELDT 575

Effects of single doses of alcohol and caffeine on cigarette smoke puffing behavior.
NIL, R., R. BUZZI and K. BÄTTIG 583

Yohimbine and rauwolscine reduce food intake of genetically obese (*obob*) and lean mice.
CALLAHAN, M. F., M. BEALES and G. A. OLTMANS 591

Effects of methamphetamine on atropine-induced conditioned gustatory avoidance.
PRESTON, K. L., G. C. WAGNER, L. S. SEIDEN and C. R. SCHUSTER ... 601

Extracellular ascorbic acid increases in striatum following systemic amphetamine.
SALAMONE, J. D., L. S. HAMBY, D. B. NEILL and J. B. JUSTICE, JR ... 609

Novelty-oriented behavior in the rat after selective damage of locus coeruleus projections by DSP-4, a new noradrenergic neurotoxin.
DELINI-STULA, A., E. MOGILNICKA, C. HUNN and D. J. DOOLEY 613

Phencyclidine in combination with *d*-amphetamine: Differential effects on acquisition and performance of response chains in monkeys.
THOMPSON, D. M. and J. M. MOERSCHBAECHER 619

BRIEF COMMUNICATIONS

MIF-1 (Pro-Leu-Gly-NH_2) decreases activity in Siamese fighting fish *(Betta splendens)*.
BROWN, M. M., P. B. SARDENGA, G. A. OLSON, S. W. DELATTE and R. D. OLSON 629

Intermittent cold water stress-analgesia in rats: Cross-tolerance to morphine.
GIRARDOT, M.-N. and F. A. HOLLOWAY 631

Similarity between (+)-amphetamine and amfonelic acid.
ACETO, M. D., J. A. ROSECRANS, R. YOUNG and R. A. GLENNON 635

Retrograde enhancement by alcohol of delayed free recall performance.
MANN, R. E., J. CHO-YOUNG and M. VOGEL-SPROTT 639

The effects of LiCl preexposure on amphetamine-induced taste aversions: An assessment of blocking.
FORD, K. A., and A. L. RILEY 643

ANNOUNCEMENT 647

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 5 MAY 1984

CONTENTS

Ethanol induces hyper and hypoglycemia in both fasted and nonfasted rats dependent on the ambient temperature.
SOUZA, M. L. O. and J. MASUR 649

Serotonin in the control of the sleep-like states in frogs.
POPOVA, N. K., I. I. LOBACHEVA, I. G. KARMANOVA and N. V. SHILLING 653

Differential effects of scopolamine on working and reference memory of rats in the radial maze.
WIRSCHING, B. A., R. J. BENINGER, K. JHAMANDAS, R. J. BOEGMAN and S. R. EL-DEFRAWY 659

The pituitary-adrenocortical system is not involved in the sex difference in passive avoidance.
HEINSBROEK, R. P. W., H. G. VAN OYEN and N. E. VAN DE POLL 663

Effects of the training dose on generalization of morphine stimulus to clonidine.
KRIMMER, E. C., M. S. MCGUIRE and H. BARRY, III. 669

Stress and sucrose hyperphagia: Role of endogenous opiates.
BERTIERE, M. C., T. M. SY, F. BAIGTS, A. MANDENOFF and M. APFELBAUM 675

Handling, ACTH, ACTH$_{1-24}$, and naloxone effects on preening behavior of domestic chickens.
WILLIAMS, N. S. and D. L. SCAMPOLI 681

Opiate receptor in praying mantis: Effect of morphine and naloxone.
ZABALA, N. A., A. MIRALTO, H. MALDONADO, J. A. NUÑEZ, K. JAFFE and L. DE C. CALDERON 683

Behavioral activity of a short chain ACTH analog.
DRAGO, F., G. CONTINELLA and U. SCAPAGNINI 689

Tripelennamine and pentazocine alone and in combination: Effects on interresponse-time-greater-than-t responding of rats.
GROSSETT, D., S. WALLACE, M. PICKER and A. POLING 697

Effects of metergoline and quipazine on locomotor activity of rats in novel and familiar environments.
BENINGER, R. J. 701

Six-hydroxydopamine induced hyperactivity: Neither sex differences nor caffeine stimulation are found.
ERINOFF, L., P. H. KELLY, M. BASURA and S. R. SNODGRASS 707

Stimulus control by diazepam of behavior maintained under fixed-ratio stimulus-shock termination schedules in rats.
SHANNON, H. E. 715

The effects of *dl*-cathinone, *d*-amphetamine and cocaine on avoidance responding in rats and their interactions with haloperidol and methysergide.
HUANG, D. and M. C. WILSON 721

Contents continued

Duration of tonic immobility in chickens as a function of alpha-adrenergic receptor stimulation and blockade.
HENNIG, C. W., J. K. FAZIO, C. A. HUGHES, W. R. CASTALDI and B. D. SPENCER 731

Anorexia and brain serotonin: Development of tolerance to the effects of fenfluramine and quipazine in rats with serotonin-depleting lesions.
CARLTON, J. and N. ROWLAND 739

Suppression of play fighting by amphetamine: Effects of catecholamine antagonists, agonists and synthesis inhibitors.
BEATTY, W. W., K. B. COSTELLO and S. L. BERRY 747

Increased brain serotonin metabolism during rebound sleep in sleep-deprived rats.
TORU, M., H. MITSUSHIO, N. MATAGA, M. TAKASHIMA and H. ARITO . 757

Ro 15-1788 and β-CCE selectively eliminate diazepam-induced feeding in the rabbit.
MANSBACH, R. S., J. A. STANLEY and J. E. BARRETT 763

Opioid antagonism of electroshock-induced seizures.
PUGLISI-ALLEGRA, S., C. CASTELLANO, V. CSÁNYI, A. DOKA and A. OLIVERIO 767

Chronic scopolamine treatment and brain cholinergic function.
MARKS, M. J., M. F. O'CONNOR, L. D. ARTMAN, J. B. BURCH and A. C. COLLINS 771

The effect of second-order schedule history on fixed-ratio performance maintained by orally-delivered phencyclidine in rhesus monkeys.
CARROLL, M. E. 779

Learned tolerance to ethanol in the spinal cord.
JØRGENSEN, H. A. and K. HOLE 789

Biochemical indices of reactivity and habituation in rats with hippocampal lesions.
KANT, G. J., J. L. MEYERHOFF and L. E. JARRARD 793

BRIEF COMMUNICATIONS

Evidence that taste aversion learning induced by *l*-5-hydroxytryptophan is mediated peripherally.
ERVIN, G. N., R. B. CARTER, E. L. WEBSTER, S. I. MOORE and B. R. COOPER 799

Phenytoin potentiates methamphetamine-induced behavior in mice.
IZUMI, K., M. NOMOTO, T. KOJA, T. SHIMIZU, C. KISHITA and T. FUKUDA 803

Effects of 6-OHDA lesions in the nucleus accumbens on the acquisition of self injection of heroin under schedule and non schedule conditions in rats.
SINGER, G. and M. WALLACE 807

Bilateral cannula system for intracranial chemical microinjection in small animals.
CZECH, D. A. and E. A. STEIN 811

Naloxone reverses the inhibitory effects of dynorphin A on motor activity in the mouse.
UKAI, M., S. YAMADA and T. KAMEYAMA 815

Local anesthetic effects of cocaine and several extracts of the coca leaf *(E. coca)*.
BEDFORD, J. A., C. E. TURNER and H. N. ELSOHLY 819

PHARMACOLOGY BIOCHEMISTRY & BEHAVIOR

VOLUME 20 NUMBER 6 JUNE 1984

CONTENTS

The effects of intrahypothalamic hemicholinium-3 on muricide, irritability and feeding.
YOBURN, B. C. and M. GLUSMAN 829

Effects of manipulations of peripheral serotonin on feeding and drinking in the rat.
FLETCHER, P. J. and M. J. BURTON 835

Effects of ethyl alcohol on hypothalamic affective defense in the cat.
JOHANSSON, G., A. HUHTALA and M.-L. LAAKSO 841

Relationships between hyponeophagia, diazepam sensitivity and benzodiazepine receptor binding in eighteen rat genotypes.
SHEPHARD, R. A., H. F. JACKSON, P. L. BROADHURST and J. F. W. DEAKIN 845

Chlordiazepoxide's interaction with ethanol intake in the rat: Relation to ethanol exposure paradigms.
ROEHRS, T., O. YANG and H. SAMSON 849

Behavioral effects of d-amphetamine and apomorphine in the hamster.
PETERSON, M. E. and L. P. MORIN 855

Serotonergic mediation of habenular self-stimulation in the rat.
NAKAJIMA, S. 859

The effects of exercise training of [^{3}H]-spiperone binding in rat striatum.
GILLIAM, P. E., W. W. SPIRDUSO, T. P. MARTIN, T. J. WALTERS, R. E. WILCOX and R. P. FARRAR 863

Enhancement of saline consumption by chlordiazepoxide in thirsty rats: Antagonism by Ro15-1788.
TURKISH, S. and S. J. COOPER 869

Spontaneous motor activity increases after portacaval anastomosis in rats.
CAMPBELL, A., B. JEPPSSON, J. H. JAMES, V. ZIPARO and J. E. FISCHER 875

Loss of sensitivity to morphine induced by prolonged ACTH treatment.
FEKETE, M. I. K., B. KANYICSKA, T. SZENTENDREI and E. STARK 879

Adrenalectomy reduces alcohol-stimulated activity: Blood and brain alcohol content.
WALLIS, C. J., R. F. ANTON and C. L. RANDALL 883

Clonidine inhibits female spawning behavior in ovulated and prostaglandin-treated goldfish.
STACEY, N. E. 887

Blockade of MK-801 induced ipsiversive turning in 6-OHDA lesioned rats by α_1-adrenoceptor antagonists.
MARTIN, G. E. and N. L. PAPP 893

Contents continued

Nature of nicotine binding to rat brain P_2 fraction.
SLOAN, J. W., G. D. TODD and W. R. MARTIN 899

Modifications in food intake and energy metabolism in rats as a function of chronic naltrexone infusions.
MARKS-KAUFMAN, R., T. BALMAGIYA and E. GROSS 911

Reinstatement of heroin and cocaine self-administration behavior in the rat by intracerebral application of morphine in the ventral tegmental area.
STEWART, J. 917

Conditioning and place-specific sensitization of increases in activity induced by morphine in the VTA.
VEZINA, P. and J. STEWART 925

The effects of clonidine, prazosin and propranolol on short-term and long-term habituation of the acoustic startle response in rats.
LEATON, R. N. and J. V. CASSELLA 935

The clonidine-induced self-injurious behavior of mice involves purinergic mechanisms.
KATSURAGI, T., I. USHIJIMA and T. FURUKAWA 943

Time-dependent changes in hypothalamic dopamine metabolism during feeding in the rat.
HEFFNER, T. G., G. VOSMER and L. S. SEIDEN 947

Effect on striatal dopamine metabolism and differential motor behavioral tolerance following chronic cholinesterase inhibition with diisopropylfluorophosphate.
FERNANDO, J. C. R., B. HOSKINS and I. K. HO 951

An improved drug infusion pump for injecting nanoliter volumes subcortically in awake rats.
IWAMOTO, E. T., E. C. WILLIAMSON, C. WASH and R. HANCOCK 959

Determinants of puff duration in cigarette smokers: I.
NEMETH-COSLETT, R. and R. R. GRIFFITHS 965

BRIEF COMMUNICATIONS

Comparison of sucrose-sucrose to sucrose-ethanol concurrent responding in the rat: Reinforcement schedule and fluid concentration effects.
SAMSON, H. H. and K. LINDBERG 973

Effects of imipramine on separation-induced vocalizations in young rhesus monkeys.
PORSOLT, R. D., S. ROUX and M. JALFRE 979

ABSTRACTS: 92nd Annual Convention of the APA Division 28 Program 989

INDEX TO VOLUME 20 997

ANNOUNCEMENTS 1027